

Water Quality Protections for Wetlands

Regulatory Overview

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Outline

1. Wetlands Definition
2. Wetland Identification
3. Classifications and Designated Uses
4. Narrative Criteria
5. Numeric Criteria
6. Missouri's Current Regulations for Wetlands

Wetland Definition

- US Army Corps of Engineers and US Environmental Protection Agency: “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

State Wetland Definition

- Most states use the USACE/USEPA definition of wetlands: KS, NE, NC, OH, IA
- Some states add more specifics to the USACE/USEPA definition
- States with more specific definitions include: FL, HI, ME, MA, WA

Identification of Wetlands

- All states we researched used the US Army Corps of Engineers Wetlands Delineation Manual (1987) and Supplements or a state published delineation manual to identify wetlands protected by their state regulations.
- We did not find any states that use maps specifically for identifying regulated wetlands.

State Wetland Classifications

- Some states classify wetlands into categories
 - NE - Wetlands/Isolated Wetlands
 - WI – General wetlands and wetlands in areas of special natural resource interest such as cold water communities, Lakes Michigan and Superior, state parks, state and federal wilderness areas, etc.
 - HI – Inland freshwater, inland brackish waters, saline waters
 - OH – Places wetlands into three categories based on their quality.
 - KS – Distinguishes publicly and privately owned; outstanding national resource waters and exception state resource waters.

Designated Uses for Wetlands

- NE – Primary contact recreation, aquatic life, wildlife, agricultural water supply, aesthetics
- OH – wetland designated use
- KS – Agricultural water supply, irrigation, livestock watering, aquatic life use with subcategories, recreational use with subcategories
- WI – designates functional values for wetlands
- IA – wildlife, fish, aquatic life (???????????)
- MN – aquatic life, recreation, agriculture and wildlife, aesthetics, etc.

Narrative Criteria

- States generally protect wetlands using narrative criteria – NE, KS, WI, OH, IA
- Additional narrative criteria – WI and/or OH
 - Stormwater/flood storage
 - Hydrology and hydrologic functions (temperature, pH, water currents, recharge, etc.)
 - Filtration or storage
 - Shoreline protection from erosion
 - Habitat for aquatic organisms and wildlife
 - Recreational, cultural, educational, scientific and natural scenic beauty values

Numeric Criteria for Wetlands

- Looked at two designated uses:
 - Primary and Secondary Contact Recreation
 - Protection of Aquatic Life

Primary/Secondary Contact - E.Coli Criteria

State	Iowa	Kansas	Massachusetts	Minnesota	Nebraska	Ohio	Wyoming
Classification	1°	1°	1° & 2°	1° & 2°	1°	1°	1°
GM Criteria (organisms or colonies/100ml)	126	160-427 (April-Oct) 800-2135 (Nov-March)	126	126	126	126 – 206 (bathing – infrequent use)	126
SM Criteria (organisms or colonies/100ml)	235	732-1950 (April-Oct) 3655-9760 (Nov-March)	235	1260	235-576 (bathing – infrequent use)	235 – 940 (bathing – infrequent use)	235 – 576 (high swim areas – infrequent use)
Classification	2°	2°	Irrigation	Boating/other forms of rec		2°	2°
GM Criteria (organisms or colonies/100ml)	630	2135	630	126		1030	630
SM Criteria (organisms or colonies/100ml)	2880	9760	1260	1260		1030	

GM = Geometric Mean

SM = Single Sample Maximum (usually not exceeding in more than 10% of the samples during a 30-day period)

1° = full body contact (i.e. bathing water)

2° = minimal body contact (i.e. wading)

Protection of Aquatic Life

- States with numeric criteria for protection of aquatic life:
 - NE – DO, pesticides, metals and inorganics, PCBs, methylmercury, ethers, chlorine, etc.
 - OH – DO, pH, ammonia, pesticides, metals, etc.
 - KS – DO, pH, T, ammonia, metals, inorganics, pesticides, etc.
 - WI – none
 - MN – pesticides, metals, inorganics, etc.

What about Missouri?

- Definition: MO uses the USACE/USEPA definition
- Identification: MO uses Corps' 1987 Wetland Delineation Manual
- Classification: Class W
- Designated Uses: None
- Narrative Criteria: MO applies narrative criteria
- Numeric Criteria: MO allows for site specific criteria on a case-by-case basis